

**LITHOGRAPHIC APPARATUS, METHOD OF DETERMINING A MODEL  
PARAMETER, DEVICE MANUFACTURING METHOD, AND DEVICE  
MANUFACTURED THEREBY**

**ABSTRACT**

A method according to one embodiment of the invention relates to determining at least one parameter of a model that provides information about a position of an object. The object has a plurality of alignment marks of which desired positions are known. The method includes measuring a plurality of positional parameters for each alignment mark. Based on the measured plurality of positional parameters, which are weighted with weighing coefficients, at least one parameter of the model of the object is determined. The numerical value of each weighing coefficient is determined together with the at least one parameter of the model.